

**In the Claims**

Please amend the claims as follows:

1. (Currently Amended) A method for the correction of video signals which, for each element of a transducer, are transmitted pixel by pixel as digital pixel values alternately via at least two channels having different transfer characteristics, where characterized in that, from the pixel values transmitted via a first channel of the channels, estimated values for each of the pixels of a second channel of the channels are formed by means of interpolation from the values of two linear adjacent pixels, and in that where correction values for the pixel values of the second channel are derived from differences between the estimated values and the pixel values of the second channel.
2. (Currently Amended) Method The method according to claim 1, where further characterized in that the correction values are only formed from those differences which are less than a predetermined value ( $K_1$ ).
3. (Currently Amended) Method The method according to claim 1, where characterized in that, further estimated values are formed from pixel values which are transmitted by interpolation by means of the second channel, in that where further differences are formed from the further estimated values and the pixel values of the first channel, in that where an average value is in each case formed from the differences and the further differences, and in that where the correction values are derived from the average values.
4. (Currently Amended) Method The method according to claim 2, where characterized in that, further estimated values are formed from pixel values which are transmitted by interpolation by means of the second channel, in that where further differences are formed from the further estimated values and the pixel values of the first channel, in that where an average value is in each case formed from the differences and the further differences, and in that where the correction values are derived from the average values.
5. (Currently Amended) Method The method according to claim 3, characterized in that where the differences and the further differences are in each case subtracted from one

another; and ~~in that where~~ the respective average value of the differences is only used for correction if the value produced by subtraction of the difference and the further difference is less than a further predetermined value (~~K2~~).

6. (Currently Amended) Method The method according to claim 4, characterized in ~~that where~~ the differences and the further differences are in each case subtracted from one another; and ~~in that where~~ the respective average value of the differences is only used for correction if the value produced by subtraction of the difference and the further difference is less than a further predetermined value (~~K2~~).

7. (Currently Amended) Method The method according to claim 1, characterized in ~~that where~~ the differences and the further differences, for the purpose of forming the correction values, are averaged separately according to the magnitude of the pixel values, ~~in that where~~ the correction values are written to a memory; and ~~in that where~~ the correction values are read from the memory depending on the respective magnitude of the pixel values and are added to the pixel values of the first and/or the second channel.

8. (Currently Amended) Method The method according to claim 3, characterized in ~~that where~~ the averaging is in each case effected separately according to the magnitude ranges of the pixel values; and ~~in that where~~ correction values are obtained for the individual pixel values by interpolation and low-pass filtering of the mean values within the various magnitude ranges.

9. (Currently Amended) Method The method according to claim 7, characterized in ~~that where~~ the averaging is in each case effected separately according to magnitude ranges of the pixel values, and ~~in that where~~ the correction values are obtained for the individual pixel values by interpolation and low-pass filtering of the mean values within the various magnitude ranges.

10. (Currently Amended) Method The method according to claim 1, characterized in ~~that the~~ the only pixel values which are evaluated are those which change at a rate ( $f$ ) which is below a cut-off frequency ( $F$ ).

11. (Currently Amended) ~~Method~~ The method according to claim 1, characterized in that the where only pixel values which are evaluated are those which change at a rate which is below the Nyquist frequency ( $N/4$ ).

12. (Currently Amended) ~~Method~~ The method according to claim 10, characterized in that where the cut-off frequency depends on the predetermined value ( $K_1$ ) or on the further predetermined value ( $K_2$ ).